Acute Coronary Syndromes

EFFICACY OF PRASUGREL IN RESUSCITATED PATIENTS DURING THERAPEUTIC HYPOTHERMIA AFTER PERCUTANEOUS CORONARY INTERVENTION FOR ACUTE MYOCARDIAL INFARCTION

Poster Contributions
Hall C
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Background: Acute myocardial infarction (AMI) is the leading cause for out-of-hospital cardiac arrest. Therapeutic hypothermia substantially improves neurological outcome. However, cardiogenic shock, post resuscitation syndrome as well as hypothermia markedly reduce platelet inhibition by the thienopyridine clopidogrel. Prasugrel, a more potent thienopyridine, achieves better platelet inhibition than clopidogrel, particularly in haemodynamic stable AMI patients. Efficacy of prasugrel during therapeutic hypothermia after resuscitation has not yet been evaluated.

Methods: We investigated 21 consecutive patients (mean age 62±2 years) admitted to our department following out-of-hospital cardiopulmonary resuscitation during AMI, who underwent urgent revascularization and immediate therapeutic hypothermia for 24 hours. Prasugrel efficacy was assessed by the platelet-reactivity-index (PRI; VASP assay) before and 2, 4, 6, 12, 24, 48, and 72 hours following a loading dose of 60mg via a gastric tube.

Results: During the observed period, prasugrel highly significantly reduced platelet reactivity determined by PRI despite intensive hypothermia (p=0.0002). In detail, mean PRI (±SEM) was 70±3% before (control) and 62±3% at 2h (n.s. vs. control), 54±5% at 4h (p<0.05 vs. control), 44±6% at 6h (p<0.01 vs. control), 39±5% at 12h (p<0.01 vs. control), 29±5% at 24h (p<0.01 vs. control), 18±5% at 48h (p<0.01 vs. control), and 13±3% at 72h (p<0.01 vs. control) after loading.

Conclusions: In contrast to previous reports describing lack of effect of clopidogrel on platelet reactivity in resuscitated patients during therapeutic hypothermia after percutaneous coronary intervention for acute myocardial infarction, prasugrel rapidly and significantly reduced platelet reactivity even despite disturbed haemodynamic conditions, vasopressor use and therapeutic hypothermia. Prasugrel given via a gastric tube might therefore be a useful therapeutic strategy in this patient cohort at high risk, to provide strong and effective P2Y12 inhibition.